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NARCOTIC DRUG ADDICTION.

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MUCH HAS BEEN LEARNED IN RECENT YEARS ABOUT THE NATURE OF DRUG ADDICTION, THE FACTORS WHICH LEAD A PERSON INTO ADDICTION, AND THE EFFECTIVE TREATMENT OF PERSONS WHO HAVE BECOME ADDICTED. THIS PAMPHLET SURVEYS THE NEW FINDINGS AND IS INTENDED PRIMARILY FOR (1) THOSE WHO IN THE COURSE OF THEIR PROFESSIONAL DUTIES COME IN CONTACT WITH ADDICTED INDIVIDUALS AND DESIRE CURRENT DATA, AND (2) FOR TEACHERS, PARTICULARLY THOSE CHARGED WITH PREPARING INSTRUCTIONAL MATERIALS. THE PAMPHLET DEALS FOR THE MOST PART WITH ADDICTION TO NARCOTICS, PRINCIPALLY OPIATES AND SYNTHETIC DRUGS WITH OPIATE-LIKE REACTIONS. THE MAJOR AREAS COVERED ARE (1) THE EFFECT OF NARCOTICS, (2) THE PEOPLE WHO TURN TO NARCOTICS, (3) THE DOCTOR AND THE ADDICTED PERSON, (4) TREATMENT IN FEDERAL HOSPITALS, (5) AFTERCARE AND OTHER NEW APPROACHES, AND (6) PREVENTING ADDICTION. PROBLEMS WITH OTHER DRUGS SUCH AS MARIHUANA, COCAINE, AMPHETAMINES, BARBITUATES, AND TRANQUILIZERS ARE ALSO BRIEFLY DISCUSSED. SINGLE COPIES ARE AVAILABLE UPON REQUEST FROM THE NATIONAL INSTITUTE OF MENTAL HEALTH, BETHESDA 14, MARYLAND. THIS DOCUMENT IS ALSO AVAILABLE FOR $0.25 FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402. (DS)

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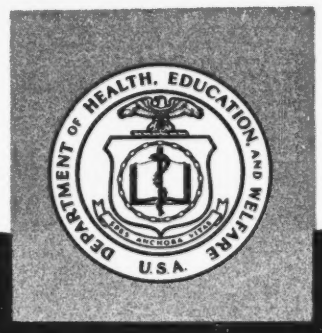
Narcotic Drug Addiction



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PUBLIC HEALTH SERVICE

MENTAL HEALTH MONOGRAPHS

This monograph is one of a series of documents published from time to time by the Publications and Reports Section of the National Institute of Mental Health. The reports are issued under the direction of the Editorial Committee of the NIMH, and represent material compiled or edited by members of the staff of this Institute. The series is designed to present comprehensive and specialized reports dealing with aspects of mental health and mental illness which will add to useful knowledge in this field.

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Publications and Reports Section
National Institute of Mental Health

MENTAL HEALTH MONOGRAPH NO. 2

Narcotic Drug Addiction

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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FOREWORD

Since the early 1920's, when a Public Health Service physician, Dr. Lawrence Kolb, conducted the first field studies in narcotic drug addiction in the United States, the Public Health Service has had a major and distinguished role in the field of drug addiction.

Dr. Kolb's papers, still regarded as classics in the field, brought a medical viewpoint to bear on the problem of drug addiction. He pointed out, first, that the majority of drug addicts are emotionally unstable individuals, and that drug addiction is largely a psychiatric problem. Second, and contrary to beliefs commonly held in the twenties, he showed that although criminals may use drugs, opiate addiction does not directly lead to crime, except as a means of procuring funds to support addiction.

In 1929, acting upon the conviction that drug addiction is primarily a medical and social problem and that attempts to treat addiction by imprisonment are illogical, the U.S. Congress enacted a law calling for the establishment of two medical facilities for the treatment of drug addicts.

When the Public Health Service Hospitals at Fort Worth, Tex., and Lexington, Ky., were opened in the 1930's, the program of treatment was based on the premise that addicts were patients, and that the effective treatment of drug addiction demanded that attempts be made to rehabilitate the addict, and to assist him in his return to society.

The Public Health Service has pioneered in the fields not only of medical care and rehabilitation but also of research. Investigations by PHS personnel in the Service's Addiction Research Center in Lexington have led to [illegible] and pilot projects supported by Public Health Service funds have begun to explore possible ways of controlling drug addiction in the community.

Thus the public health approach to the problems of drug addiction involving prevention, treatment, and social rehabilitation is being introduced into our communities. If this approach is to succeed, factual knowledge about the subject of drug addiction must become common knowledge. For this reason, it is my hope that this publication will be widely read, and that the information it transmits will assist in the formation of constructive public attitudes toward the problem of drug addiction.

LUTHER L. TERRY, M.D.,
Surgeon General, Public Health Service.

PREFACE

If drug addiction is to be controlled in our society, a great deal more biological, clinical, and social research must be done on this problem. There is much we do not know about the nature of addiction. There are many clinical answers to the problem of drug addiction which we do not yet have. There are many social answers to the problem of drug addiction which we do not yet have. Answers to all aspects of the problem must be sought with increasing vigor in the coming years.

I believe that some of the missing answers to this grave problem must and will be found and developed within our communities. This can only come about, however, as sound knowledge about drug addiction becomes widespread, and as the effects of the problem of drug addiction on the social, physical, and mental health of a community are honestly faced.

I believe this publication will play a significant role in imparting such sound information about drug addiction and the problems addiction creates for the addict, his family, and his community. I further believe that armed with such knowledge, our communities will mobilize existing resources, and develop new ones, to bring the problem of drug addiction under control.

ROBERT HANNA FELIX, M.D.,
Director, National Institute of Mental Health.

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Narcotic Drug Addiction

SCOPE OF PAMPHLET

Much has been learned in recent years about the nature of addiction, the factors edging a person into addiction, and the effective treatment of persons who have become addicted. Very much more remains to be learned. This pamphlet surveying the new findings is intended primarily for those who, in the course of their professional duties, occasionally come face to face with an addicted individual or his family and wonder what can and should be done. It is intended also for teachers—in particular those charged with preparing material on health problems. But it should be of interest to almost anyone looking for a short report on our present knowledge of the subject.

The pamphlet deals for the most part with addiction to narcotics—principally the opiates and synthetic drugs with opiate-like reactions. Problems associated with other drugs are, however, briefly discussed.

BACKGROUND OF PROBLEM

Narcotic drugs have been used to relieve pain and induce a feeling of well-being as far back as man has records, and probably a good deal farther. Opium is listed on Assyrian medical tablets dating to the 7th century B.C. and on an Egyptian list of remedies drawn up probably in the 16th century B.C. The Sumerians had a word for it even earlier—about 6,000 years ago.

Until very recent times, opium in one form or another was mankind's principal medicine because all through the centuries when little was known about the causes of illness, doctors naturally concentrated on the symptoms—and opium could dull the pain and discomfort of almost any disorder.

For many people, particularly in eastern countries, opium had social as well as medicinal values. They used it for much the same reasons that other people have used alcohol.

Drug addiction began to be a sizeable problem in the United States following the Civil War. Three main factors were at work:

1. The occurrence of the Civil War just a few years after the introduction of the hypodermic syringe, which made it possible to administer morphine, opium's principal ingredient, through the skin and thus relieve pain more rapidly. Of the wounded soldiers given injections of morphine to ease pain, so many became addicted that their condition was described as "army disease." Many civilian patients, too, given injections for any one of dozens of disorders, found that they had to keep on getting them.

2. The introduction of a great variety of patent medicines containing opium or opiates and sold freely, without prescription, in every drugstore and even in crossroads general stores.

3. The introduction of opium smoking by the Chinese who had been brought in to help build the railroads of the West. Though the immigrants themselves were in general an orderly crew, the Americans who picked up the opium habit represented the shadier elements among the adventurers. As the practice of opium-smoking spread eastward, after 1870, it appealed mostly to the same elements.

By 1900, according to one estimate, the United States had 264,000 narcotic addicts—

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more than 5 times as many as the current Bureau of Narcotics estimate, though the country then had less than half as many people. Many of the addicts were people who had taken or been given opiates as a medicine, and most of these were decent, working members of the community. By and large, however, the opium smokers were not.

THE INTRODUCTION OF HEROIN

About 1900 a drug closely related to morphine and known chemically as diacetylmorphine was developed in Germany and offered under the name of heroin as a safe replacement for its relative—one that could be employed, even, to cure addiction to morphine. Doctors welcomed it, used it enthusiastically, and then discovered that, contrary to the original claims, it was highly addicting. Opium-smokers discovered something else: they could get the same effects from snuffing heroin as from smoking several pipes of opium, and faster, without fuss, and with little danger of detection.

Today, heroin is the only opiate available to most addicts. The illicit trade prefers it to morphine because, since it is three times as powerful, a given quantity is worth three times as much, and also because heroin can be more easily diluted.

WHY THE PROBLEM IS IMPORTANT

Measured only by the number of addicted persons, the problem is considerably smaller than it was in 1900. Addiction reached an alltime low during World War II, when the underworld found it extremely difficult both to obtain narcotics abroad and to smuggle them in; then addiction increased for a few years and again began declining.

According to the Bureau of Narcotics, the number of addicted persons, which may have reached 60,000 during the early 1950's, dropped during the next decade to about 46,000. These numbers refer to known addicted persons and are subject to error. On the one hand, not all addicted persons are known to the Bureau; on the other hand, a person is continued in the files as an addict for 5 years after the last report indicating that addiction is present, and some of the persons who continue to be listed are no longer addicted. Some authorities consider the figures too low.

In part, the great decline in the number of addicted persons has occurred because medical knowledge and education have greatly improved; medical textbooks have been warning against the indiscriminate use of narcotics since the beginning of the present century. Most importantly it has occurred because a growing worldwide campaign against the opium trade led to the passage in 1914 of the Harrison Narcotic Act. In the early 1920's, following Supreme Court interpretations of this law, addicted persons were cut off from legal supplies of narcotics.

Measured by its total effect on society, however, the problem of addiction may have grown worse. Today's addict must spend most of his time scheming to get his drug and the money to pay for it. As the cost of maintaining his "habit" mounts from a few dollars a day to as much as $75, he impoverishes his family and, typically, resorts to crime. In New York City alone, it has been estimated, addicts must raise between $500,000 and $700,000 every day—most of it through shoplifting, burglary, forgery, prostitution, and other illegal activities.

The burden of addiction falls not only on the individual and his family, but also on the police and the courts, hospitals, welfare departments, and other agencies serving the community. Most addicts—going through a seemingly endless series of "cures" and relapses—impose the burden again and again and again.

The Effect of Narcotics

WHAT HAPPENS WHEN NARCOTICS ARE TAKEN

The typical addict prefers to take heroin, morphine, or a similar drug intravenously. A few seconds after the injection, his face flushes, his pupils constrict, and he feels a tingling sensation, particularly in his abdomen. The tingling soon gives way to a feeling that everything is fine: as the addict expresses it, he is "fixed." Later he may go "on the nod," drifting into somnolence, waking up, drifting off again, and all the while indulging in daydreams. The effects of the drug wear off in 3 or 4 hours.

Experiments at the Addiction Research Center of the National Institute of Mental Health, the Center is located at the Public Health Service Hospital, Lexington, Ky.) showed that drug users appeared uninterested in any activity, let their living quarters become extremely messy and spent most of their time in bed. A drug user "on the nod" could be awakened easily and would then answer questions accurately. Given a psychological test, he would not score quite as high as usual, and given a task he might perform it somewhat more slowly than usual. He readily lapsed back into somnolence. Smokers frequently fell asleep with lighted cigarettes in their mouths.

Unless he is somnolent, or has taken enough of the drug to make him sick, the person under the influence of an opiate may not behave abnormally, and there is no easy way to show that he *is* under the influence. But narcotics do upset the body's chemistry. The person who regularly takes a drug like heroin or morphine soon finds that unless he increases the dose, the drug no longer has the same degree of effect. He has developed *tolerance*. As the months go by, he has to increase the dose again and again, and eventually he finds that even large doses will no longer bring him the feeling of well-being that was once a main reason for taking drugs. Long before this point is reached, he has become dependent on the drug.

Dependence is both psychological and physical. The addicted person uses drugs to shut out his problems and quiet his anxieties, and the oftener he turns to them for relief, the stronger becomes their hold on him. In this respect, drug taking is like coffee drinking, cigarette smoking, or any other pleasure-giving habit. Addiction is not just "in the head," however; it is a matter also of being physically dependent—so dependent that without the drug the user becomes sick.

THE WITHDRAWAL SICKNESS

A few hours after his last dose, an addicted person becomes nervous and anxious and then, if he can't get more of his drug, develops the withdrawal sickness or the abstinence syndrome. Many of the symptoms resemble those of severe influenza. The addicted person perspires, has chills, suffers waves of gooseflesh. His eyes water and his nose runs. Either asleep or awake, he tosses restlessly. As time goes on, his arms and legs begin to ache and to twitch almost constantly. . He is nauseated, vomits, has diarrhea. His nervousness and anxiety increase. He may crawl into a corner, cover himself with a blanket even in the hottest weather, and beg piteously for a "shot."

If he has been taking heroin, the abstinence symptoms reach a peak in 24 hours; if morphine, in from 36 to 48 hours. In either case, within a week after he has last had his drug, the addict has lived through the worst of the withdrawal sickness and, in his words, "kicked the habit." He is weak and nervous, but he has lost most of his physical dependence on drugs. Complete recovery requires from 2 to 6 months.

The withdrawal illness is much less severe when the addicted person is withdrawn or

detoxified—that is, removed from physical dependence on drugs—under the medical method commonly used today.

THE BODY'S RESPONSE TO NARCOTICS

According to a widely accepted theory, tolerance and the withdrawal sickness are both related to the action of forces that try to keep the body's processes functioning in balance. When a person takes a drug like heroin or morphine, this theory explains, his autonomic nerve centers try to compensate for its effect, which is chiefly depressant. They do this through certain changes in the activity of the central nervous system. But the depressant effect is what the addicted person craves, and in order to get it he must keep the compensatory forces in check by taking more and more of the drug. When he stops taking it, the compensatory forces are suddenly released and the body has to fight for some days to return to an even keel.

Medical observations are in accord with this theory. For instance, morphine constricts the pupils and depresses the respiratory rate; during the withdrawal sickness, however, the pupils dilate and the breathing becomes abnormally heavy.

Experimentation seems to bear out the theory, too. As a notable example, scientists at the Addiction Research Center have given morphine and allied compounds over extended periods to animals in which the spinal cord has been severed. At first the drug strongly depresses two of the reflexes in the legs of these animals and strongly stimulates another. As the animals develop tolerance, however, these effects tend to disappear. Then when the drug is discontinued, some spectacular changes occur—just opposite to the original effects. The reflex that has been stimulated disappears; one that had been depressed becomes so active that the legs are in constant motion. None of these changes can be ascribed to activity in the brain, because the brains in these animals had been severed from the legs.

Other studies indicate that morphine—presumably again through its action on the nervous system—slows the activity both of the adrenal glands, whose hormones help the body meet stress, and of the sexual glands.

Such experiments and studies help explain the lessened drive of the addicted person and his decreased interest in sexual activity (contrary to a fairly common notion, drugs like heroin and morphine do not lead to the commission of sex crimes; instead they tend to put a brake on desire). They also explain the symptoms of the withdrawal illness. But answers to how narcotics bring about these effects—that is, how they change the activity of the nerve cells—await further research.

The People Who Turn to Narcotics

WHY DO PEOPLE TAKE DRUGS?

Studies of juvenile narcotics users in New York City—and such studies are important because today's addicted persons have generally begun using drugs in their teens—show that a favorite occasion for taking heroin is just before a dance or party. For many of them, perhaps most, the drug serves much the same purpose as another drug, alcohol, serves in the case of some other youngsters, whether in the New York slums or the Westchester suburbs: it helps the anxious individual feel at ease, mix more freely, and have a good time. Whatever the occasion, some of those who take a shot of heroin—like some of those who take a shot of whiskey—do so only for a thrill or to go along with the gang or to thumb a

nose at authority; not all of these will take the drug often enough to become addicted.

By and large, the people who become addicts are those for whom drugs serve a special need, which can be summed up as the relief of pain. Last century the pain that led to addiction was often physical; today it is mainly psychic. Most of today's addicted persons have discovered, in other words, that opiates relieve their anxieties, tensions, feelings of inadequacy, and other emotional conditions they cannot bring themselves to cope with in a normal way. The relief lasts only a few hours, of course, but they tend to seek it again and again.

The user becomes physically addicted—"hooked," he says—after he has taken drugs several times a day for about 2 weeks. But there is now evidence that the addicting process begins with the very first dose.

Perversely, all the work involved in getting and paying for the drug gives the addict what everybody has to achieve one way or another, a sense of accomplishment, and therefore strengthens his addiction. Also, once he has become physically dependent, he has a new biological need to satisfy, and satisfying it—like satisfying hunger—gives him pleasure.

The addict leads a wretched existence. He is in trouble with his family and, sooner or later, with the law. He may be sick one day because he cannot get his drug, and sick the next because, trying for quick relief, he has taken too much of it. He has to raise more and more money.

Eventually, particularly if he has been arrested a few times, the drug user will admit he has a problem. The problem is "the habit," he says; if only he could be cured of it, his other troubles would be nothing. He really believes this, and—despite the fact that most addicts, once they have been withdrawn from drugs, soon return to them—he may in a sense be right. For in order to cure addiction, it appears necessary to do something about the personality problems that helped bring it on.

THE KINDS OF PEOPLE WHO BECOME ADDICTED

Two psychiatrists who studied addicted persons at the Public Health Service Hospital in Lexington found that they were generally noncompetitive individuals who preferred to handle their anxieties by avoiding the situations that provoked them. One principal source of anxiety related to the expression of sex; drugs reduced their sexual urge. Another major source of anxiety related to the expression of aggression; drugs took the edge off their aggressiveness.

Before taking drugs, reports another authority, the addicted person is afraid to attack his problems; afterward, he knows he could solve the problems "but the new-found ease and calm are so satisfying that he feels there is no necessity to do anything about them."

Authorities emphasize that no two addicted persons are alike. "Many are far above average in intelligence," reports a clergyman who has worked closely with addicted persons for a dozen years. "Some are extremely dull-witted. Some have worked all their lives and have supported their habits with their earnings. Some were leaders of fighting gangs before they became addicted. There are artists, musicians, and potential social workers among them." He adds that they are "people without a purpose;" other authorities described them as "rootless."

In sum, addicted persons have personality problems—of many different types—and addiction is a symptom of these problems. But most people with such problems do *not* turn to drugs as a way of handling them. This is true whether their distress stems from a weak, inadequate personality, or from the anxieties or other manifestations of a neurosis, or from a so-called character disorder, manifested by antisocial activities and an apparent indifference as to what is right and what is wrong.

It takes three things to make an addict—a psychologically maladjusted individual, an available drug, and a mechanism for bringing them together. Contrary to general belief,

the bringing-together is largely accidental. The susceptible person does not, as a rule, start out looking for a shot and he is not, as a rule, coaxed into taking one by a "pusher" for the illegal drug trade. Ordinarily he is introduced to drugs by his associates.

BACKGROUNDS OF ADDICTED PERSONS

A study in Chicago in the 1930's showed that although nine city areas had only 5 percent of the population, they contained half of the known narcotics users. These areas were the most blighted ones. They suffered from a wide variety of social problems, and the people in them—from the social and economic standpoint—were the poorest in the city. The residents tended to be recent migrants—foreign-born people finding it hard to get ahead.

Later studies in the 1950's showed that drug users in Chicago were distributed much as they had been at the time of the first study. In many of the areas, however, there had been a great change: Negroes had replaced the foreign-born. But the old and new residents of these areas of high drug use had one thing in common: social and economic deprivation.

Similarly, a study in New York City found that three-fourths of the adolescents using drugs lived in 15 percent of the city's census tracts and that these were the poorest, most crowded, and most dilapidated areas of the city.

JUVENILE DRUG-USERS

The New York study referred to above—made by the Research Center for Human Relations, New York University, and financed by the National Institute of Mental Health—led to a number of significant findings about young addicted persons. Here are some of them, as condensed from a summary by two of the authors:

- Youngsters who experiment with drugs know that what they are doing is both illicit and dangerous but have a "delinquent" orientation toward life. Eighth-grade boys with a favorable attitude to the use of drugs view life with pessimism, unhappiness, and a sense of futility, and they distrust authority.
- On almost every block in the three deprived areas studied, there are antisocial gangs and "respectable" boys. The chance of a boy's becoming exposed to drugs depends, to a large extent, on his association with delinquent groups. In spite of great pressure, many of the boys do not associate with such groups. By and large, they are the boys who have a father, a teacher, or a pastor to whom they can talk about things that bother them.
- In 14 of the 18 delinquent gangs studied, the use of heroin and the smoking of marihuana were more or less common. The general attitude was: "It is O.K. to use heroin if you feel like it—as long as you make sure you don't get hooked."
- Juvenile addicts in general—even before they take drugs—are easily frustrated and made anxious, and they find both states intolerable. They cannot enter into prolonged, close, friendly relations with others; they have difficulties assuming a masculine role. Such troubles can be traced to their family experiences. For example: Relations between parents were often seriously disturbed, as evidenced by divorce, separation, hostility; the parents often gave the children no clear standards of behavior to follow, so the boy who eventually took drugs had no strong incentive to suppress impulse and develop discipline; since the father was absent, or cool or hostile, the child had relatively little chance to identify with and model himself after a male figure; most of the parents had unrealistically low ambitions for their boys, reflecting their own pessimistic attitude toward life, and they were distrustful of teachers, social workers, and other representatives of society.
- The activities of the gang offer to members and hangers-on a sense of belonging. But

as the group grows older, these joint activities are given up as "kid stuff," and the maturing youngsters develop more individual concerns about work, future, and a steady girl. Members or hangers-on who are too disturbed emotionally to face the future as adults find themselves seemingly abandoned by their old cronies and begin to feel increasingly anxious.

● The psychologically vulnerable youngster, experimenting with various drugs, finds that heroin is peculiarly effective in relieving strain. The less disturbed youngsters are satisfied with an occasional shot, but the unhappy, anxious ones turn to it as a means of relief from their everyday difficulties. Those who are members of delinquent gangs participate less and less in gang warfare and sports and more and more in gang-organized robberies and burglaries.

In sum, for an unstable individual who does not have the kind of guidance parents usually try to give, drugs offer a solution to the problem of growing up.

THE ADDICT AND THE CRIMINAL

There is no evidence that narcotics in themselves turn a person to a life of crime, but they do affect individuals in ways that allow them to violate laws. For example, a person who sets fire to a building because he was smoking while drowsy after taking a drug has broken a law. So has a physician who fails to provide good medical care because he is under the influence of a narcotic. Further, a great many narcotic users do turn to crime to support their addiction.

Most of the juvenile users in the New York City study were spending at least $40 a week on heroin, but eventually addicts come to spend much more. On the average in New York City, the Mayor's Advisory Council on Narcotics Addiction estimated, an addict spends between $20 and $25 a *day*. Estimating that the city had 25,000 addicts, the Council put the total daily payments for drugs at between $500,000 and $700,000. The addicts raised this money, the Council said, by committing 50 percent of the city's crime.

On the other hand, persons who are basically antisocial may begin taking narcotics long after starting on a criminal career. With such persons criminal activity is not caused by a need for drugs; it is a continuing expression of antisocial tendencies.

In general, the crimes committed by addicted persons are against property rather than against persons. In Chicago in 1 year, 30 percent of the arrests among the general populace were for sex offenses or for assault; among narcotics users, however, less than 3 percent of the arrests were for these types of crime. Almost 60 percent of the arrests among addicts were for larceny; another 25 percent for robbery and burglary. Those addicted persons who committed serious offenses against property and persons were usually individuals who had committed similar offenses before becoming addicted.

Over most of the nation, addicted persons have been arrested and sentenced not for using drugs but for possessing them, or for selling them—often to get money to buy some for themselves. A few States have had laws making addiction itself a crime, but a 1962 Supreme Court decision declared such laws unconstitutional Currently, the possession of any amount of narcotics obtained illegally is a criminal offense.

As the result of the rise in addition right after World War II, Congress provided severer penalties—for example, a sentence of from 2 to 10 years for a first offense involving possession of narcotics, and a minimum mandatory sentence of 5 years for selling them. For subsequent offenses the sentences range from 10 to 40 years. One provision criticized by many authorities is the denial of probation, parole, or suspended sentence except in the case of a first offense involving possession.

The Doctor and the Addicted Person

The addicted person who turns up in a doctor's office may be someone the doctor knows well—another physician, perhaps, or some member of a family prominent in the community. More often he will be a stranger with a plausible story of needing drugs only until he can get back to his own physician or until his own physician returns. The visitor may tell the doctor frankly he is addicted. Or he may say he has angina pectoris, kidney colic, migraine, hemorrhoids, or some other condition and detail his symptoms very realistically. Other physicians, he is likely to say, have found that only narcotics will relieve his pain, and he may even produce a drug label based on a prescription that another doctor has given him, he says, and that has proved very effective.

What is the physician to do? What are his rights and obligations?

RECOGNIZING THE ADDICT

The addicted person who comes to the doctor's office will probably appear to be physically and mentally normal. If the doctor suspects addiction, the most important finding will be the presence or absence of needle marks on arms, legs, hands, abdomen, or thighs, or signs associated with withdrawal of the narcotic. Another important finding will be the presence or absence of anything to explain the symptoms related by the patient. Often, however, instead of permitting the physical examination necessary to uncover these findings, the patient will leave the office.

The only sure way to demonstrate addiction is to bring on the withdrawal sickness. This can be done by isolating the patient from narcotics but presents a problem because the patient (a) may refuse to undergo the process, (b) may agree to go to a hospital for the process but arrange to have drugs smuggled in, or (c) may, rarely, have such a serious physical disease that even diagnostic withdrawal is unwise.

The abstinence syndrome can also be brought on by injecting N-allylnormorphine, a fairly new drug that has proved a highly effective antidote for morphine, heroin, and similar narcotics. Injected into persons who have recently taken such a drug, it induces signs of the withdrawal illness within 15 minutes. Several States use or plan to use it to check on addicted persons who have been released on probation or parole. But it has to be used with care. A more accurate test for drug use is one to demonstrate the presence of an opiate in the urine. It must be performed in a laboratory.

TREATING THE ADDICT

Federal law does not prohibit a physician from treating an addict. It simply says that the physician may prescribe or dispense narcotics "in the course of his professional practice only." The Supreme Court has ruled that it is not proper professional practice to dispense narcotics to addicts without attempting to cure them, and the American Medical Association has recommended against any system of treatment that places drugs in the hands of the addict for self-administration.

In sum, a physician may prescribe narcotics to anyone, whether or not addicted, if the purpose is to treat some painful disease and not to maintain an addict in the state of addiction for an extended period. The physician may treat addiction itself either in or out of a hospital. However, the American Medical Association has taken the position that it is impractical to treat addiction unless the patient's intake of narcotic drugs can be controlled by the physician and that such control

almost always requires hospitalization.* (The prospect of living without drugs arouses such anxiety that even addicts who voluntarily enter hospitals or private sanitariums often try to bring in a supply of their drug.)

As a practical matter, then, the physician with an addict on his hands should either treat him himself in a suitable hospital facility or refer him to a suitable facility for treatment. Until recently, virtually the only institutions to which an addicted person could be referred—unless the patient's family could afford a private sanitarium—were the Public Health Service Hospitals at Lexington, Ky., and Fort Worth, Tex. Now an increasing number of municipal and State hospitals have facilities for addicts: information about them can be obtained from local and State health departments and State departments of mental hygiene.

If there is a waiting period, drugs that may be essential to health should be administered either by the physician himself or under his supervision in a general hospital—and only for the shortest period possible. The addict should not be given a prescription for narcotics.

"It may very well be that the regulations concerning dispensing of drugs to addicts have been interpreted and enforced too rigidly," the Council on Mental Health of the American Medical Association reported in 1957. "A physician who furnished an addict a small quantity of narcotics to tide him over until he reaches an institution, or who gives an addict narcotics so he can arrange his affairs prior to entering a hospital for treatment is in danger of being charged with a violation of the law despite the fact that he may be acting in what he regards as the best interest of his patient. The Council . . . feels that the regulations should be altered to cover situations of this sort."

Must the physician report cases of addiction? That depends on the State law; there is no Federal requirement that he do so.

*For detailed information on the withdrawal of narcotics, as the first step in treatment, see, among other works: Isbell, Harris, "Opium Poisoning," in Cecil and Loeb, "A Textbook of Medicine," W. B. Saunders Co., 11th ed., 1959, p. 1637.

Treatment in Federal Hospitals

Under legislation passed in 1929, the Public Health Service was authorized to establish hospitals where Federal prisoners who were narcotic drug addicts could be treated. It was also authorized to accept voluntary patients if beds were available. The result was the establishment in the mid-1930's of the Public Health Service hospitals at Lexington, Ky., and Fort Worth, Tex.

The hospital at Lexington, which receives male addict patients from east of the Mississippi River and female addict patients from the entire country, has accommodations for about 1,000 patients. The hospital at Fort Worth has 800 beds, half of which are used for male addict patients from west of the Mississippi.

Almost half of the 2,770 patients admitted during 1961 at Lexington—44 percent—came from New York. Illinois was second, with 13 percent, Ohio third, with 4 percent. At Fort Worth there were 661 addict admissions, with 29 percent from Texas, 26 percent from California, and 9 percent from Louisiana.

During the first years, virtually all the patients were addicts who had been convicted of some Federal offense and sent to the hospitals by the Federal Bureau of Prisons. Now, however, a great many are individuals who have entered voluntarily. In fact, at Lexington, 75 percent of the admissions are now of voluntary patients, though these come and go at such a rate that at any given time they constitute only about 50 percent of the total.

Some of the voluntary patients come because they genuinely want to stop taking narcotics; others, because they have been threatened with arrest unless treated; others, because their supply of drugs has been cut off; others, because they want to lose an expensive "habit" and then go back and get the same kick for less money.

Generally there is a short waiting period, but the hospitals try to take first-time patients at once. Application for admission can be made by a letter to the medical officer in charge of the appropriate institution. Voluntary patients who can afford to pay are charged $9.50 a day.

THE PATIENTS AT LEXINGTON

About three-fourths of the patients admitted during 1961 were men, and 60 percent were white. The white group included Puerto Ricans, who made up 10 percent of the total admissions. Only 2 percent of the patients admitted were less than 20 years old; 74 percent were between 20 and 39. About one-third were married.

Fifty-three percent of the newly admitted patients claimed to have been unemployed; 20 percent admitted they had been working at illegal occupations.

Sixty-eight percent had not finished high school. Eighty-five percent were in the lowest of five socioeconomic levels, and most had a background of severe emotional and social deprivation. (But some of the persons admitted were doctors and nurses; every year Lexington takes in about 60 of these.)

About 90 percent of the patients were classified by Lexington doctors as easily frustrated, impulsive, unstable, and unable to plan ahead; in the hospital they were often childishly demanding and stubborn.

TREATMENT OF PHYSICAL DEPENDENCE

The treatment program aims to prepare a patient to return home and live without using narcotics, and the first step—called withdrawal or, in some other hospitals, detoxification—is to treat his physical dependence on drugs. This is accomplished by substituting methadone for heroin—or whatever other narcotic he has been using—and then gradually reducing the dosage of the substitute drug.

Methadone is a synthetic drug, discovered in Germany just before or during World War II, with only a very slight chemical relationship to morphine and the other opiates. Until 1945, when the Addiction Research Center tested methadone, Lexington had been withdrawing addicts by giving them injections of morphine in gradually decreasing amounts. The new drug proved to have two great advantages: it was very effective when given by mouth, which meant that the nursing staff could lay aside the hypodermic syringes, and its action lasted longer, which meant that the staff could cut down on the number of doses. When morphine was the withdrawal drug, the addicted person received it in a ward he called "the shooting gallery;" now, drinking reddish-colored methadone from a little glass, he calls the ward "the cocktail lounge."

For the heavily addicted person, the acute phase of the withdrawal period may last 10 or 12 days, but for the usual addict, who has been taking a highly adulterated drug, it is over much sooner—in about 4 days. During this period he is sick, but the decreasing doses of methadone flatten out the peaks of the illness and make it endurable. At the end he is transferred to the Orientation Ward for a convalescence period lasting about 2 weeks. He regains his appetite and strength during this time but shows irritability and restlessness, symptoms that may last for several more months.

In the Orientation Ward, the patient is interviewed by members of the vocational, correctional, social service, and psychiatric staffs and a course of treatment is then outlined by his administrative physician, a psychiatric resident who supervises his program until the patient is discharged.

PREPARING PATIENTS FOR LIFE OUTSIDE

Fewer than a fourth of the patients get any formal psychotherapy, partly because the staff is too small and partly because many patients resist it or are judged incapable of being benefited by it. However, all activities of the hospital are designed to have therapeutic value for people who, by and large, have never quite grown up, distrust everybody in authority (and virtually everybody else), and have substituted drug-taking for practically everything that occupies other people.

All physically able patients are assigned to jobs—in the kitchen, the butcher shop, or the bakery; as a waiter or as an attendant; in maintenance and engineering; painting and glazing, woodcrafts, needle trades, printing, or agriculture; as a laboratory assistant, an auto mechanic, an electrician, a typist, or a variety of other occupations. For almost all types of work there is a training program that helps prepare the patient to get and hold a job when he is discharged. The primary purpose of the vocational program, however, is not to get patients on payrolls but to help them establish work habits and learn to work with other people. This means that they have to learn to put some controls on themselves and also to accept authority.

"Immature adults, like normal children," a former medical officer in charge at Lexington points out, "resist and reject authority because it limits their freedom of action. To many of our patients authority is regarded in terms of their past experience with their parents and society—as hostile, punitive, and rejecting. Constructive, consistent relations with authority figures of a different type may permit a modification of previous reaction patterns."

At Lexington the patient also has an opportunity to participate in softball, basketball, boxing, and other sports, go bowling, watch TV and movies, play in an orchestra, take part in a show, help get out *The Blue Grass Times* (a lively newspaper, by and for the patients, featuring a column, "The Talk of Nar-Towne"), and use one of several libraries.

The patient may attend church services and consult a chaplain of his own faith. He may join Narcotics Anonymous, known also as Addicts Anonymous. His vocational supervisor, the psychiatric aides in his dormitory, his physician, and social service workers all stand ready to listen and, where advisable, offer help.

Lexington believes that if a person is to completely recover from physical addiction and start a new pattern of life—in which drugs are *not* used, either to produce pleasure or banish distress—he ought to stay in a drug-free environment for 4 months after receiving his last narcotic drugs. More than one-third of the voluntary patients, however, leave within 2 weeks—as soon as they have gone through the withdrawal period, or shortly afterward. By the end of the first month, more than half have gone. Less than one-third stay as long as the doctors would like. All the others are discharged AMA—against medical advice.

AFTER THEY LEAVE THE HOSPITAL

Lexington records show that of some 35,000 patients since 1935 fewer than half have returned (but of these many have been back 5 or more times). What happened to those who did not return? How many stayed free of drugs and how many merely avoided—or were denied—the opportunity to go back? What about those who did return: why did they relapse? Unfortunately, nobody knows the answers. The best information now available on what happens to Lexington patients is provided by a followup study of some 1,900 residents of New York City who were discharged between July 1952 and December 1955. *More than 90 percent of them became readdicted—generally within 6 months.*

A similarly high readdiction rate prevails among persons treated at New York City's Riverside Hospital. This is a joint hospital and school facility, with a capacity of 140

patients, set up in 1952 to care for drug users under 21 years of age.

Does this mean that treatment of the physical addiction is only successful in about 10 percent? Hardly. Any patient who stays for more than 2 weeks is over the acute illness phase. One Lexington medical officer points out that if they were then killed in an accident, they could be recorded as persons who had recovered. Instead of being killed, though, the typical addict—at least, the typical New York City addict—goes back to his same old associations and his same old troubles and eventually turns to drugs again for relief. He does well in a sheltered, drug-free environment, but away from it he finds his world too painful and himself too weak.

Doctors at Lexington can tell of patients who have stayed free of drugs for years and apparently will continue to stay free. One has become an official of his home town. Another—who telephones greetings year after year on Christmas Eve—owns a little business on the West Coast. And one founded Narcotics Anonymous after he had been to Lexington eight times.

Doctors can also cite illuminating cases of readdiction—a woman free of drugs 15 years, whose marriage broke up; a lonely, rootless man who finally found a sweetheart and lived happily for the first time, till the woman suddenly died.

Physicians now look on addiction as a chronic disease, with relapses to be expected. But they believe, too, that the periods of abstinence can be lengthened and—in many cases, at least—perhaps extended indefinitely if only the right measures can be found and applied. The Lexington followup study gives some reason for optimism because it shows that:

1. Readdiction rates were lower for persons over 30 than under it. The implication (supported by other evidence): As addicted persons grow older, there is some tendency toward giving up drugs, presumably because some of these persons are becoming emotionally more mature.

2. Readdiction rates were lower for those who had gone to the hospital as prisoners than for those who had gone voluntarily. One explanation, presumably, is that the prisoners had to stay longer, though stays beyond 30 days apparently brought no improvement in readdiction rates. Another likely reason: the involuntary patients often had someone to report to regularly upon release—a parole or probation officer.

HOSPITAL AND POSTHOSPITAL PROBLEMS

Hospital authorities would like to have some means of keeping voluntary patients under treatment as long as the doctors in charge of the treatment think necessary. They are particularly concerned about the patient who has withdrawn from treatment several times against medical advice and then applies again for admission, with nothing to indicate that he will stay beyond the time necessary for withdrawal. The answer may lie in legislation enabling a hospital staff to seek civil commitment—in the courts of the States where the hospital is located—for individuals who in the judgment of the staff require it.

From the viewpoint of the Public Health Service, the long-term answer to this and other problems presented by voluntary patients lies in the establishment of State and municipal facilities sufficient to care for all the addicted persons who now apply to Federal hospitals. Such facilities, too, of course, will need ways to keep their patients long enough.

No matter where an addicted person is treated, however, hospitalization is only the first step; posthospital supervision, or what is commonly known as aftercare, is usually just as essential. Among five measures to which the American Medical Association and the National Research Council of the National Academy of Sciences gave their support, in a joint statement in 1962 on narcotic addiction, the first three were listed as "1, after complete withdrawal, followup treatment for addicts,

including that available at rehabilitation centers, 2, measures designed to permit the compulsory civil commitment of drug addicts for treatment in a drug-free environment, 3, the advancement of methods towards rehabilitation of the addict under continuing civil commitment." (The other measures were "4, the development of research designed to gain new knowledge about the prevention of drug addiction and the treatment of addicted persons, and 5, the dissemination of factual information on narcotic addiction.")

Aftercare and Other New Approaches

Since hospitalization by itself has proved insufficient, a number of additional approaches have been tried or suggested. Most of them have to do with aftercare, where the problems include what services should be offered, what organizations should offer them, and how the addicted person can be induced to accept them.

This section notes some of the new approaches.

THE NEW YORK DEMONSTRATION CENTER

It seemed reasonable to suppose at one time that the problems of the addicted person might be solved, once he had been discharged from Lexington or some other hospital treating addiction, if only all the resources of the community could be brought to bear on them. To test this hypothesis, and to assist cooperating agencies to extend their services to addicted persons, the National Institute of Mental Health in 1957 set up a Demonstration Center in New York City staffed by eight social workers and a psychiatric consultant. Selected patients returning to New York from Lexington were advised to go to the Center if they needed help. A social worker would listen to an individual's problems and then enlist the services of any community group—such as the city welfare department, the State employment service, and counseling agencies—that could help solve these problems.

During its 5-year life, the Demonstration Center worked with more than 900 recent Lexington patients ranging in age from 16 to 72. It was a frustrating and educational experience. The addicts were neat, undemanding, not difficult to deal with. Most of them seemed genuinely eager for help in overcoming their addiction, and they said they wanted jobs. But they were also hypersensitive and suspicious—quite naturally, perhaps, in view of their backgrounds and the fact that this was a government project. They wanted their problems solved in a hurry, and most of them could not admit that they had any problems except the immediate ones—like money or a place to live. They seemed puzzled over what to do with freedom, yet often they could not bring themselves to keep appointments whether with the Center itself or with cooperating agencies. Many of them were placed on jobs, but most of these soon relapsed to using drugs and left.

On the other hand, a number did work out better ways of dealing with strains in their family and social relationships and stayed away from drugs longer than ever before. Once more those under probation or parole tended to do better than the others.

This lesson emerged clearly: for the addicted person coming out of the hospital, a guidance center is not enough: he must also have some resource—an agency or an individual—to provide constant step-by-step support of his efforts.

In 1962 a new demonstration began in the Washington Heights area of New York City. One of its objectives is to explore the potential role of a local public health agency in working with some portions of the narcotic addict

population and their families. The demonstration is a cooperative project involving the New York City Department of Health, the New York City Community Mental Health Board, and the National Institute of Mental Health.

CHURCH MISSION IN EAST HARLEM

Since 1956 a church mission in New York City—the East Harlem Protestant Parish Narcotics Committee—has been demonstrating the value of direct, personal support. A crudely painted insigne over the door to its headquarters, a converted store in an area containing several hundred known addicted persons within a radius of four blocks, depicts a cross bearing down and smashing a hypodermic syringe, but the religion practiced within is simply that of the Golden Rule and of the admonition to forgive, even up to seventy times seven.

The EHPP Narcotics Committee, which is staffed by two ministers, a sociologist, and a secretary, helps the addicted person go through the routine of entering a hospital, generally one in New York City, and visits and counsels him. If he has been arrested, it visits him in prison. It visits and counsels his family. When he is free, it helps him find a job—and food and lodging, too, if necessary. Its doors are open for a while every morning so that persons with emergencies can be helped, and they are open again all afternoon and certain evenings.

Until 1962, staff members saw between 15 and 20 persons a day at headquarters. Then, as the committee's work became more widely known and as New York City provided more beds for addicted persons, the number of visitors began rising and on some days reached as many as 70.

At this point the committee, asking for city or Federal funds to increase its staff, pointed out that it could no longer take care of the needs of everyone asking for help and at the same time give sufficient attention to the individual. And it emphasized that only by forming continuing relationships with the addicted person himself could a staff member "begin to help him reshape his life pattern along lines more compatible with society's."

Of those the committee has worked with in an intensive way in an effort to help them recognize and do something about their emotional problems, the number who are free from narcotics at any one time remains constantly between 20 and 22 percent. This is a relatively high percentage.

A PAROLE PROJECT

Late in 1956 the New York State Division of Parole established a special narcotic project under which four parole officers—trained social workers—were each assigned 30 addicted persons newly paroled from reformatories and State prisons. Because the caseload was lighter than the one usually carried, each officer could see his parolees frequently and visit their families, too. Many of the addicted persons seemed to look forward to their sessions with the officer: they had no one else to turn to for advice. And many of the families proved to be just as much in need of counseling as the parolees and eventually came to regard the visitor as a friend rather than a law enforcement agent.

Over a 3-year period, the special project supervised approximately 350 parolees, and of these 42 percent—an unusually high proportion—did not return to the use of drugs.

In reporting on the project, the supervising parole officer wrote:

> A discharged patient who has no one to help him get a job, who is confronted with the same family tensions, who has no vocational or academic skills to prepare him for life, who is shunned by employers and legitimate members of his community, is doomed to failure before he leaves the hospital. Unless someone is there to extend a *firm* but *helping* hand, another incurable case will be entered on the records.

AN AFTERCARE PROGRAM AT A HOSPITAL

Mainly as a laboratory for study and research, a narcotic addiction treatment unit was established in 1959 at Metropolitan Hospital, which is a municipal general hospital in East Harlem associated with New York Medical College. All patients come in voluntarily and are housed in a locked ward. As at Lexington, they are withdrawn from heroin by the methadone-substitution method, but the withdrawal period lasts 2 or 3 weeks, and they are eligible for discharge about a week later. They undergo psychotherapy during their hospital stay and are urged to continue treatment as outpatients.

Metropolitan's program emphasizes aftercare. In addition to continued psychotherapy, it offers a number of services, including help with financial, family, and housing problems, vocational counseling, legal advice, a clubroom where anyone who has been treated may spend his free time, and arts, crafts, games, sports, parties, shows, and other recreational activities.

During the first 2 years of the program, the majority of the patients did not continue treatment. The ideal center for rehabilitation of the addicted person, say the psychiatrists in charge of Metropolitan's program, would be a day-night hospital, where persons who had been treated would spend half of each 24 hours. "A full range of services would be provided," they suggest, "including a street-work staff reaching out into the neighborhood and the precinct home, psychotherapy, drug therapy, vocational counseling, educational rehabilitation, selected vocational placement, sheltered workshop, family counseling, and recreational therapy. It is this kind of broad effort that seems necessary for attacking the problem."

SOME STATE AND CITY ACTIONS

Under a California law passed in 1961 any addicted person may volunteer or be sentenced to treatment in the California Rehabilitation Center, a hospital expected to have room for 1,800 narcotic addicts. Once admitted, he has to stay at least 6 months, and even if he came in voluntarily he may have to stay as long as 5 years. Prisoner or volunteer, he is released on parole, and to win discharge from this he must remain drug-free at least 3 consecutive years. Eventually patients released from the hospital may spend some time in a halfway house as further preparation for resuming life in the outside world. Making addiction itself a crime is unconstitutional, said a 1962 Supreme Court decision. It stated also that in the interest of the general health and welfare a State might establish a program of compulsory treatment of those addicted.

Under a New York law passed in 1962, addicted persons who are arrested may request treatment in a State hospital having a special narcotics unit. New units will give the State a total of 555 beds for such persons. Patients must stay in the hospital as long as the doctors think necessary. They will remain under supervision of the Commissioner of Mental Hygiene, inside and outside the hospital (after release they must report regularly to an aftercare facility) for a period of up to 36 months. Commitments will not be made when the court considers them contrary to the interest of justice or when space is not available. The State's programs in narcotics research and aftercare as well as in treatment are growing; they are directed by a central office in the Department of Mental Hygiene.

A pilot project in Maryland—at the Spring Grove State Hospital, Catonsville—emphasizes the need to build up an addicted person's esteem. Upon his release from a closed ward, after a month or two, he is assigned to a job in the hospital, and later is given ground privileges. Later, if he shows responsible behavior, he is given weekend paroles. Five days a week he goes out from the hospital to learn a trade or a skill, returning at night. Upon his discharge, he returns to the outpatient clinic once a week for counseling and other help.

New York City's master plan for narcotics control, which is under the direction of a Narcotics Coordinator appointed in 1960, calls for hospitalization in community institutions (which in 1962 had several hundred beds for addicted persons and planned additional ones) and then for aftercare to be supplied by neighborhood groups, outpatient departments of municipal hospitals, health department clinics, halfway houses (to ease the return to the community) and work camps (for long-term rehabilitation, vocational guidance, and eventual job placement). The program also calls for educational and preventive activities and for research and evaluation.

CANADA'S APPROACH

Under the new Canadian Narcotic Control Act, passed in 1961, the criminal addict—that is, the addicted person who has been arrested—is to be treated in a Federal rehabilitation center and, when released, is to be subject to the supervision of the Parole Board. This supervision lasts indefinitely. The Federal Government offered to treat *all* addicts in the same centers, but whether or not it will do so depends upon whether or not the provincial governments will provide for the committal of addicted persons who are not charged with any criminal offense.

Another important feature of the act is that Canadian physicians now may prescribe drugs for the state of addiction as well as for disease. The Narcotic Control Division keeps a watchful eye upon such cases to make sure the treatment is in good faith.

AMONG OTHER EFFORTS

Alcoholics Anonymous, founded to help people addicted to alcohol, often works also with people addicted to other drugs. Patterned on it is Narcotics Anonymous, which some authorities on addiction report has been troubled by a tendency on the part of the police to note who attends the meetings. Another authority writes: "It is too bad that Narcotics Anonymous has had so little encouragement and backing from community leaders that it must struggle along with insufficient funds. The by-passing of this group is in all probability due to the deeply ingrained and widely held belief that drug addicts cannot get together for any constructive purposes."

In the Los Angeles area an organization called Synanon has enabled a number of addicted persons to cure themselves for sizeable periods. It is a residential organization. An addicted person is accepted only if he agrees to kick his habit "cold turkey"—that is, without the use of methadone or any other drug—and to remain at Synanon a considerable time. During the first 6 months or longer, he lives and works within the building. Then he gets a job on the outside but continues to live at Synanon, contributing most of his earnings to the community. Eventually he moves to a place of his own but continues to visit Synanon frequently and take part in group sessions. In 1962 the organization reported that more than 100 of its addicted persons—most of them still residents—had been free of drugs for as long as 4 years. Residents stress the fact of motivation. As they progress they can become responsible for part of the program: they may even become members of the board of directors.

A RESEARCH CLINIC

In the early 1920's, following a Supreme Court decision holding it illegal for a physician to prescribe drugs to an addicted person merely to gratify his addiction, States and municipalities opened some 40 so-called narcotic clinics. Most of them were simply dispensaries set up to provide persons with drugs in order to prevent exploitation by drug peddlers. They were all closed by 1924. There is no clear record of their accomplishments, for good or evil.

Some authorities have argued that if an addicted person could get his drug legally,

through his physician or a carefully supervised clinic, he would not have to buy it from criminals and he would not have to turn to criminal activities himself. Therefore, the profit would go out of drug-smuggling, the relation between addiction and crime would be broken, and the addicted person could become self-supporting.

Further, this argument goes, in order to obtain their drugs legally, addicted persons could be required to undergo treatment intended to help them understand themselves; eventually many of these might drop drugs entirely. (Some of the addicted persons treated as outpatients by a group of New York psychotherapists began within 2 months after starting treatment to consider dropping drugs.)

Many other authorities, however, have argued to the contrary. For physical reasons, because of the development of tolerance, they say, the addicted person must continue to increase his dose in order to get the desired effect. If he could not obtain as much of the drug from his physician or clinic as he wanted, he would go back to the illegal market. He might continue to patronize the drug peddler in any event, giving or selling to friends anything beyond his own needs.

In a joint statement in 1962, the American Medical Association and the National Research Council of the National Academy of Sciences declared that "the maintenance of stable dosage levels in individuals addicted to narcotics is generally inadequate and medically unsound and ambulatory clinic plans for the withdrawal of narcotics from addicts are likewise generally inadequate and medically unsound."

To bring scientific evidence to bear on the problem, a number of individuals and groups—including the Joint American Bar Association and the American Medical Association Committee on Narcotic Drugs—recommended "an experimental facility for the outpatient treatment of drug addicts to explore the possibilities of dealing with at least some types of addicted persons in the community rather than in institutions."

THE BRITISH METHODS

Under certain circumstances, in Britain as in the United States, a doctor may legitimately administer drugs to addicted persons. In Britain these circumstances, as defined in 1926 by the Departmental Committee on Morphine and Heroin Addiction, have included "persons for whom, *after every effort has been made for the cure of addiction,* the drug cannot be completely withdrawn, either because:

> 1. Complete withdrawal produces serious symptoms which cannot be satisfactorily treated under the ordinary conditions of private practice; or
> 2. The patient, while capable of leading a useful and fairly normal life so long as he takes a certain nonprogressive quantity, usually small, of the drug of addiction, ceases to be able to do so when the regular allowance is withdrawn.

In 1960 a second group—the Interdepartmental Committee on Drug Addiction, appointed 2 years earlier by the Minister of Health—concluded its study of, among other questions, whether or not there were still circumstances in which the continued administration of drugs could be justified.

Great Britain, this committee reports, has only a very small addiction problem—454 known addicts in 1960, out of a population of more than 50 million. Furthermore, the illicit trade in morphine, heroin, and drugs of similar effect is "so small as to be almost negligible."

As for point 1, given above, the new committee finds that only institutional treatment is likely to be satisfactory but that, since there are so few addicts, it would be impracticable to establish treatment centers exclusively for addicted persons. Initial treatment is best undertaken in the psychiatric ward of a general hospital, it advises, and long-term supervision "would best be undertaken at selected centers." Compulsory commitment to an institution "is not desirable."

With point 2 the committee agrees but emphasizes that "the continued provision of supplies to patient addicts depends solely on the

individual decision made by the medical practitioner professionally responsible for each case." Contrary to a widespread impression, in Britain an addicted person is not automatically entitled to receive drugs and there is no official system for allocating him regular supplies.

From time to time, the committee reports, "there have been doctors who were prepared to issue prescriptions to addicts without providing adequate medical supervision, without making any determined effort at withdrawal, and, notably, without seeking another medical opinion. Such action cannot be too strongly condemned." But no such doctor is known at present, and in 20 years there have been only two habitual offenders.

Under present regulations, the Government may withdraw from an offending doctor his authority to possess and prescribe dangerous drugs—provided he has been convicted of an offense against laws relating to these drugs. The committee considered a proposal to establish special medical tribunals that would advise the government whether or not in particular cases there were sufficient medical grounds for administering drugs by the doctor concerned, either to a patient or himself. If a tribunal decided there were not, the Government could act without a previous conviction in the courts.

The committee opposes such tribunals. "Irregularities in prescribing of dangerous drugs," it concludes, "are infrequent and would not justify further statutory controls."

Both British and United States law limits dispensing or administering narcotic drugs by physicians to bona fide professional practice. However, authorities feel that there are differences between them in the interpretation of what is bona fide professional practice. In addition, the vast difference between the two countries both in the size of the problem and the extent of the underworld's connection with it appears to stem primarily from differences in culture and history. As a notable example, Britain has not experienced mass immigration, or migration, of greatly underprivileged people.

Along with law enforcement, the cause of the almost negligible traffic in illicit drugs, says the British committee, "seems to lie largely in social attitudes to the observance of the law in general and to the taking of dangerous drugs in particular."

THE HOPE FOR SAFER DRUGS

Compounds developed as possible substitutes for morphine, codeine, and other opiates, are submitted for testing to the Committee on Drug Addiction and Narcotics of the National Research Council. If they appear to be non-addicting in animals, the committee recommends a test with human volunteers at the Addiction Research Center, Lexington. In recent years these tests have shown that a number of new drugs are just as effective as codeine in suppressing coughs but, in spite of the fact that they are closely related to codeine, are not addicting. In other words, chemists have succeeded in splitting off the cough-relieving elements of an addicting drug, and there is hope that they will be able to do the same thing with pain-relieving elements.

In preliminary tests in 1962 one compound induced much the same effects as morphine but, when withdrawn, only minor signs of abstinence. If further testing bears out these findings, the new compound may come to replace methadone in treating physical dependence.

Another promising compound proved as effective in early tests as morphine in relieving pain but to be no substitute for morphine or methadone in treating the withdrawal illness; hence there was hope that it would prove to be non-addicting. But the scientists in charge of the tests recall that the same hope existed for every opiate or opiate-like drug introduced since 1900, and they are determined to let no new compounds come into use under false colors.

Preventing Addiction

With any disease or disorder, it is better to prevent than to treat, and this is particularly true when treatment is long and difficult.

Programs directed toward improving mental health and eventually reducing the number of susceptible individuals are needed, but these call for a long-term effort. In blighted areas, improving the environment will reduce the number of individuals who would use drugs if they were available, but this, too, is a long-term effort.

Since most addicted persons have been introduced to narcotic drugs by someone who is himself addicted, or is heading toward addiction, the treatment and rehabilitation of addicted persons will help prevent the spread of addiction. But such treatment, of course, is difficult and costly.

Addiction can also be fought by reducing the availability of illegal drugs. A substantial reduction in the supply of such drugs in the United States has been accomplished at relatively little expense, and along with this decline has come a substantial decrease in the number of addicted persons. Reducing the supply of narcotic drugs is probably the most readily available means of preventing narcotic drug addiction.

Addiction To Other Drugs

When physicians and law enforcement officers talk about addiction, they almost always mean addiction to morphine, heroin, and other opiates or opiate-type drugs. But two entirely different drugs, marihuana and cocaine, are associated in the public mind with "the drug menace" and are under Federal control, and a third class of drugs, the barbiturates, presents a greater problem than either of these.

MARIHUANA

In this country, marihuana, prepared from the leaves of the hemp plant, is generally smoked as a cigarette; in eastern countries, preparations of the same drug, known there as hashish, are chewed, smoked, or drunk. Smokers generally use the drug at social gatherings and become mildly intoxicated; they do not develop tolerance and do not become physically dependent. However, certain unstable ones may become psychotic, and smoking marihuana has been for many juveniles a step to taking heroin.

COCAINE

This drug, which comes from the leaves of the coca plant and was widely used as an anesthetic until chemists replaced it with novocaine, today has relatively few users. But it is responsible for the common misconception that all drug takers are "dope fiends." Taken by injection, cocaine confers a feeling of tremendous power, and when this soon dies, the user tries to recapture it by taking more, and then more. Eventually he develops dangerous hallucinations and may assault people in the belief that they are persecuting him.

Tolerance does not develop, and abstinence symptoms do not occur.

THE AMPHETAMINES

Like cocaine, the amphetamines powerfully stimulate the central nervous system. These are the so-called "pep pills." They have medicinal uses but when taken in excess—as they often are by mixed-up persons seeking a thrill or an escape—they bring on a number of toxic

symptoms including heightened blood pressure, rapid pulse, sweating, tremors, spasms, and sometimes a psychosis.

BARBITURATES

With the exception of the opiates and alcohol, the chief addicting drugs in use today are the sedatives known as barbiturates—in particular, the more potent, quick-acting ones such as pentobarbital, secobarbital, and amobarbital. Taken in small amounts and under the direction of a physician, these depressants of the central nervous system do no harm; taken in uncontrolled quantities at frequent intervals, they are as truly addicting as heroin or morphine and give the individual and his physician an even greater problem. Hence in prescribing barbiturates the physician should use the same care as in prescribing narcotics.

Like alcohol, the barbiturates are intoxicating. Addicted persons—who suffer from the same type of personality disorders as those who become addicted to opiates—use them for short sprees or long debauches, or even to keep more or less continuously intoxicated. The person intoxicated with barbiturates is drowsy and confused, unable to think clearly, and unable to coordinate muscular action when he stands or walks. He is depressed, irritable, morose, and quarrelsome. He shows poor judgment, and finds it difficult to perform simple tasks or take simple psychological tests.

Sudden, complete withdrawal of barbiturates from an addicted person usually results in convulsions and often a temporary psychosis resembling delirium tremens. Death may follow. So the drug must be withdrawn under medical supervision over a relatively long period.*

Among the patients at Lexington, roughly 20 percent have been addicted to both barbiturates and narcotics, and for these the withdrawal period usually runs from 10 to 14 days. In some cases of addiction to barbiturates, however, withdrawal may take as long as 2 months.

The barbiturates do not come under the narcotic laws and nobody knows how many persons are affected; however, the number appears to be many thousands and to have grown greatly over the last decade or more. Persons addicted to barbiturates alone are not legally eligible for treatment at the Public Health Service hospitals.

TRANQUILIZERS

Tranquilizers of the meprobamate group have also been shown to be addicting if taken in fairly large daily amounts over a period of months.

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*For more detailed information, see, among other works: Isbell, Harris, "Barbiturate Poisoning," p. 1631, "A Textbook of Medicine" by Cecil and Loeb, W. B. Saunders Co.

Drug Addiction: Summing Up

SOME OF THE IMPORTANT THINGS KNOWN

1. Addiction is usually a symptom of a personality maladjustment, though no typical addict personality has been identified. In recent times in this country addiction has been most prevalent among deprived groups in large cities. The illness itself—that is, the compulsion to take drugs once one has become addicted—is both physical and psychological.

2. Curing an addicted person's physical dependence on drugs can now be accomplished humanely and quickly. Curing his psychological dependence, or his tendency to use drugs to solve his problems, may take years—so far as we know—because it is rooted in his maladjustment.

3. Many addicted persons relapse frequently after treatment; some, not at all. It seems

reasonable to view addiction as a chronic illness, with relapses to be expected but with the hope that the periods of abstinence will grow longer.

4. Hospitalization is not enough because, upon discharge, the patient often finds himself in the same painful environment that helped lead to his addiction. The return of a treated addict to an environment where drugs are available is almost a certain return to addiction. Some type of aftercare program extending for a long period, and perhaps indefinitely, seems needed to strengthen and train the addicted person for normal living. One problem: typically the addicted person has been treated as an outcast and even a criminal and he feels he will continue to be treated that way.

5. The addicted person does best when he has some type of authority to bolster him; like an adolescent, he wants limits set on him. Possibly this authority can be effectively exerted by an experienced worker in the field of addiction—physician, pastor, social worker—who is genuinely interested in the addicted person, has time and patience to help him, and wins his respect. Possibly it must have the force of the law behind it for best results.

6. Addiction can be prevented (a) through mental health programs to reduce the number of susceptible persons; (b) through continued efforts to reduce the availability of illegal drugs; (c) through treatment that reduces the number of addicted persons, since these bring the drug and the susceptible person together; (d) by improving the conditions in the deprived neighborhoods where addiction is most common.

IMPORTANT POINTS REQUIRING FURTHER RESEARCH

1. Why do some individuals with a personality maladjustment become addicted to drugs, the opiates in particular, while others—even some of those who experiment with drugs—do not?

2. How do drugs work on the cells of the brain and the body? Are certain people more likely than others, biochemically, to become addicted?

3. What are the most effective types of hospital and aftercare programs? And where, in relation to the addicted person's community, should they be located?

4. Why do some addicted persons seek out and accept help while others do not?

5. What measures are needed to keep an addicted person in a hospital long enough for him to get the maximum benefit? And how long is that? Also, what are the most effective ways of exposing an addicted person to an aftercare program, and keeping him exposed?

6. Are certain addicts incurable, on the basis of everything we now know? If they are, can they be maintained as useful members of society—and the profit taken out of the illicit market—by some arrangements for supplying drugs legally?

7. What happens to addicted persons over a period of years? In the case of those who relapse, what are the factors involved? What factors enable the others to remain abstinent?

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